California Environmental Protection Agency
Department of Pesticide Regulation

Methyl Bromide Requirements

Worker Health and Safety Branch

Human Health Mitigation Program

Changes Resulting from New U.S. EPA Labeling *(continued)*

Good Agricultural Practices (GAP)

- Tarps are required
  - Exceptions: Deep shank orchard & hand-held tree hole
- Weather forecast required
  - For the day of fumigation & the 48-hour period following fumigation.

Changes Resulting from New U.S. EPA Labeling *(continued)*

GAP's Continued...

- Soil temperature
  - Must not exceed 90^{o} F at the injection depth.
- Soil moisture
  - Must be moist 9 inches below the surface using the USDA feel and appearance method.
- Soil preparation
  - Must be generally free of clods that are golf ball size or larger.
  - The area must be tilled to a depth of 5 to 8 inches.

Changes Resulting from New U.S. EPA Labeling *(continued)*

- Site-specific fumigant management plan (FMP)
  - Must be completed for each application block.
- Post-application summary
  - Must be completed for each application block.

Enforcement Question

Q: While reviewing the Fumigant Management Plan (FMP) you notice the post application summary isn't completed. Is this a violation?

A: Are you reviewing the FMP before or after the application?

1. If you are reviewing the FMP before the application or up to 30 days after application, the post application summary does not need to be completed.

2. If you are reviewing the FMP at least 30 days after the application, the post application summary does have to be completed.

Changes Resulting from New U.S. EPA Labeling *(continued)*

Respiratory protection and stop work triggers for formulations with 80% methyl bromide or less:

- No respirator is required unless the handler experiences sensory irritation.
  - Note: (3CCR 6784 (b)(2)(C)) In CA a half-face respirator is required during the entire fumigation-handling activity if work hours in Table 1 are followed.
  - In CA if a full-face respirator is worn, an employee may perform fumigation-handling activities without the work-hour limitations specified in Table 1 [3CCR 6784 (b)(3)(A)(1)].
- Handler can either wear an air-purifying respirator (APR) or operations must cease.
- Handlers not wearing an APR must leave the application block.

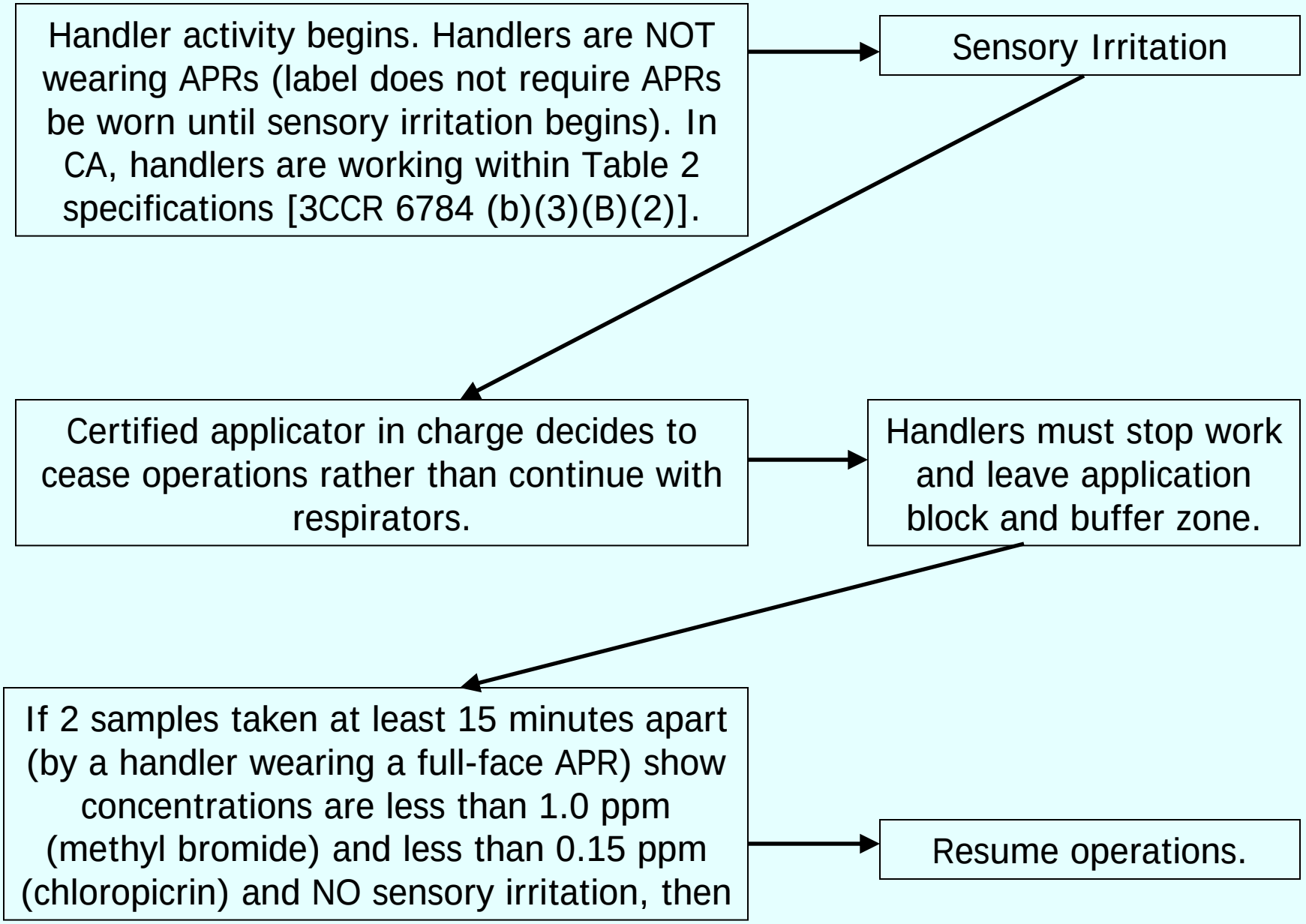
Changes Resulting from New U.S. EPA Labeling *(continued)*

For formulations with less than 80% methyl bromide:

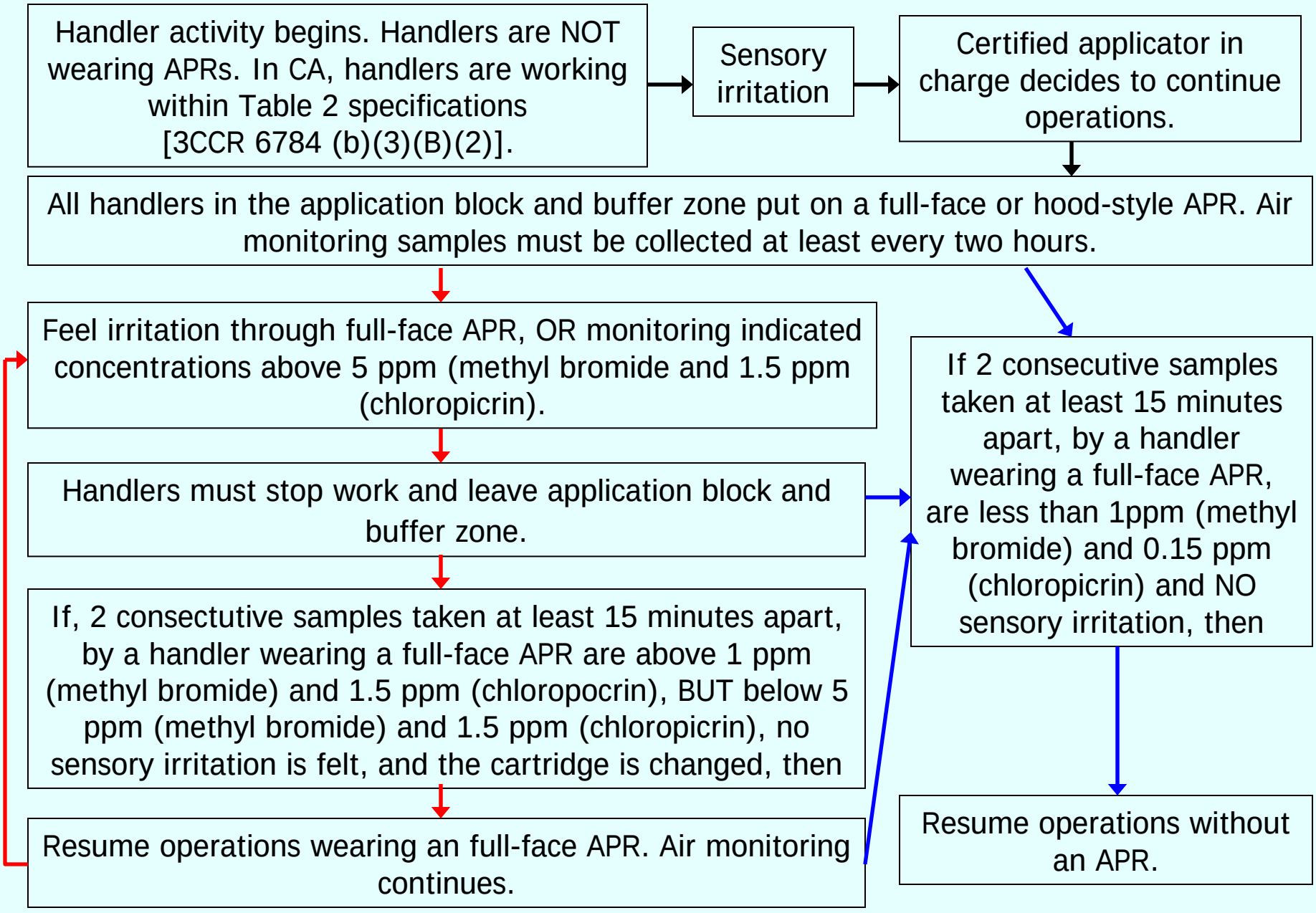
- Application can resume without respirator when 2 consecutive breathing – zone samples taken at least 15 minutes apart show methyl bromide levels less than 1 ppm **and** chloropicrin levels less than 0.15 ppm.

- Direct reading detection devices must be used for these measurements.

Requirements For When Handlers Should Cease Operations (80% or Less Methyl Bromide)



Requirements For When Handlers Should Put On A Respirator (80% or Less Methyl Bromide)



Changes Resulting from New U.S. EPA Labeling *(continued)*

For formulations with greater than 80% methyl bromide:

- Respirators must be worn during all handler tasks
  - As the percentage of chloropicrin applied decreases, there is a greater likelihood handlers will NOT immediately experience sensory irritation if exposed to air concentrations above the level of concern.
- Breathing-zone air samples for methyl bromide and chloropicrin must be collected at least every hour.

Changes Resulting from New U.S. EPA Labeling *(continued)*

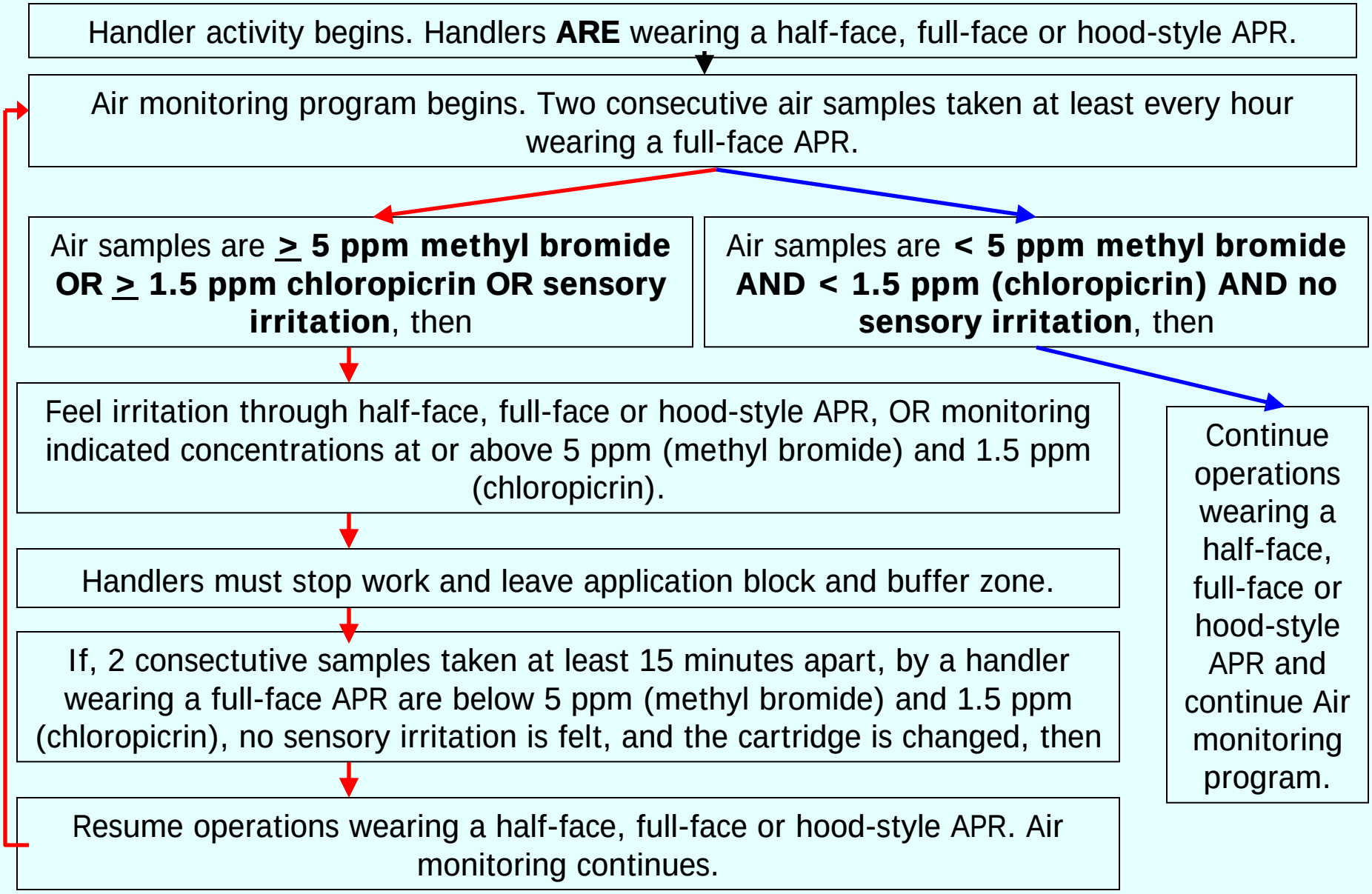
For formulations with greater than 80% methyl bromide:

- If a handler experiences sensory irritation while wearing a respirator, **or**

  an air sample is 5 ppm or greater for methyl bromide, **or**

  chloropicrin levels are 1.5 ppm or greater, then all handler activities must cease and handlers must leave the application block and surrounding buffer zone.

Requirements For When Handlers Start Work Wearing a Respirator (>80% Methyl Bromide)



Changes Resulting from New U.S. EPA Labeling *(continued)*

All formulations of Methyl Bromide:

- Work activities can resume when two consecutive air samples, taken at least 15 minutes apart, are less than 5 ppm for methyl bromide and 1.5 ppm for chloropicrin.

- Direct reading detection devices must be used for these measurements.

Affect of Current Lawsuit on DPR Regulations

- Methyl bromide restrictions have been in regulation since 2000.
- Court challenges began soon after they were adopted.

Affect of Current Lawsuit on DPR Regulations *(continued)*

A summary of the latest lawsuit...

- December 2004 - DPR was sued on the grounds that the methyl bromide regulations were not developed jointly and mutually with OEHHA, and that the regulations were not based on OEHHA's recommendations.

- February 2006 - the judge ruled against DPR. DPR appealed.

Affect of Current Lawsuit on DPR Regulations *(continued)*

- July 2008 - the appellate court issued a final decision, affirming the lower court decision in invalidating the regulations. The court ordered DPR to redo the regulations within one year, working closely with OEHHA in determining the sub-chronic health risks for methyl bromide.

- September 2010 – DPR submitted the final statement of reason to the Office of Administrative Law.

- November 26, 2010 – The amendments to Title 3, California Code of Regulations (3 CCR) sections 6447, 6447.2, and 6784 are effective.

Changes Made to Methyl Bromide Regulations

1. County Agricultural Commissioners cannot use buffer zone sizes smaller and durations shorter than those specified in the Methyl Bromide Field Fumigation Buffer Zone Determination document.

2. Clarified the description of the respirator that must be used when required by employees involved in field fumigation.

Changes Made to Methyl Bromide Regulations *(continued)*

3. Revised the limit on the amount of methyl bromide that can be applied in any calendar month in any township.

4. Revised Table 1, the maximum work hours in a 24-hour period.

Changes Made to Methyl Bromide Regulations *(continued)*

3. Township Cap Limitation

- Previously, CAC had to ensure ambient air concentrations of methyl bromide did not exceed an average daily non-occupational exposure of 9 parts per billion.

- New language places a township cap of 171,625 pounds for each calendar month. County agricultural commissioners shall deny any permit or notice of intent that would cause the 171,625 pound limit to be exceeded.

Changes Made to Methyl Bromide Regulations *(continued)*

4. Work hour changes to Section 6784(b)(3) Table 1

- Most of the work hours were reduced by one hour (see handout)
- Exceptions to the Table 1. Maximum Work Hours have not changed
- Formula to determine work hours has not changed

$$\left(\frac{\text{maximum application rate for method}}{\text{actual application rate}}\right) \text{X} \boxed{\begin{array}{c}\text{maximum}\\ \text{work hours in a}\\ \text{24-hour period}\end{array}} = \boxed{\begin{array}{c}\text{revised maximum}\\ \text{work hours in a}\\ \text{24-hour period}\end{array}}$$

Comparison of DPR/EPA Respiratory Requirements

- EPA: **Labels** with less than 80% methyl bromide allow for handlers to perform work activities without a respirator until sensory irritation is experienced.

- DPR: **Regulation** requires that when the work hours in Table 1 are followed, a half-face respirator must be worn by handlers during the entire duration of the fumigation-handling activity.

Comparison of DPR/EPA Respiratory Requirements

- EPA: **Label** requires air sampling to monitor methyl bromide and chloropicrin levels when a respirator is worn.

- DPR: ***Enforcement decision*** *(not in regulation): If a handler is wearing a half-face respirator because of CA regulation (Table 1) then air monitoring would only be required when the handler experiences sensory irritation.*

Comparison of DPR/EPA Respiratory Requirements

- EPA: **Labels** with greater than 80% methyl bromide require respirator be worn by handler during all handling activities (not triggered by sensory irritation). Air monitoring required by label instructions must be followed.

- DPR: **Regulations** in Table 2 allowing work without a respirator would not apply if label states respirator must be worn during all handling activities.

Scenario:

In April 2011, a California tractor driver has worked for five days during different broadcast methyl bromide (Tri-Con 57/43) applications while wearing a half-face respirator (all were applied at the maximum rate per acre).

Questions:

1. Is the driver wearing a respirator because of a label requirement or because of regulation? Regulation
2. According to the table below, is there a violation? Day 5 (work hours)
3. If the driver wasn't wearing a respirator what would be the violation? Day 4 (work days)

24 Hour Period	Activity	Hours Worked
Day 1	Driving	2
Day 2	Driving	3
Day 3	Driving	2
Day 4	Driving	3
Day 5	Driving	9

For Further Information

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